

Application No. 09/886,266
Amendment under 37 CFR 1.116
Reply to Office Action dated July 28, 2005
October 28, 2005

AMENDMENTS TO THE CLAIMS

Please substitute the following claims for the pending claims with the same numbers, respectively:

Claim 1 (Currently amended): A solid state imaging device, comprising:

a solid state imaging element having at least two input terminals;

a timing signal generation circuit which generates an optical black clock pulse indicating an optical black section and an enable signal indicating timing at which an output from said solid state imaging ~~elements~~ element stops during at least one vertical field; and

a clamping means, comprising a first amplifier means for inputting the output of said solid state imaging element at one of the input terminals; a sampling means for sampling the output of said first amplifier means and which includes a switch which goes ON during said optical black section and a retention section; a target value setting means which sets a target value for output ~~and an amplifier means for amplifying a difference value indicating a difference between said target value and an~~

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~~optical black signal obtained at a timing of said optical black~~
~~clock; and which, along with feeding back said difference value,~~
~~matches a signal level of said optical black section outputted~~
~~from said solid state imaging element to a constant value by~~
~~maintaining an output of said amplifier means while the enable~~
~~signal outputted from said timing signal generation circuit is~~
~~being obtained ; and a second amplifier means for receiving the~~
output from said first sampling means and said target value level
from said target value setting means via a low pass filter means,
amplifying the difference between them, and inputting the
difference to said first amplifier means; which amplifies the
difference between the output of said second amplifier means when
the enable signal is active and retains the output of said second
amplifier means when the enable signal is inactive, and feeds
back the amplified signal to said first sampling means during a
period said enable signal is active.

Claim 2 (Original): A solid state imaging device which
comprises a clamping means which matches a signal level of an
optical black section outputted from a solid state imaging
element to a constant value, in which said clamping means
comprises:

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a first amplifier means which inputs the output of said solid state imaging element at one of its input terminals;

a first sampling means, which includes a switch which goes ON during said optical black section and a retention section, and which samples the output of said first amplifier means;

a target value setting means which sets a target value for output;

a second amplifier means which receives the output from said first sampling means and said target value level from said target value setting means via a low pass filter means, amplifies the difference between them, and inputs it to said first amplifier means;

a second sampling means which samples the output of said second amplifier means during a period when an output signal is obtained from said solid state imaging element;

a third amplifier means which amplifies the difference between an output of said second amplifier means and an output of said second sampling means; and

a switching means which connects an output terminal of said third amplifier means to said retention section of said first sampling means during a period in which no signal is being outputted from said solid state imaging element, and terminates

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this connection during a period in which a signal is being
outputted from said solid state imaging element.

Claim 3 (Original): A solid state imaging device according
to claim 2, in which said third amplifier means is a differential
amplification device of the open loop type.

Claim 4 (Original): A solid state imaging device according
to claim 2, in which said target value setting means comprises:

a D/A converter which converts the data of said target value
to an analog signal; and

a buffer amp which impedance converts the output of said D/A
converter.

Claims 5-15 (Cancelled):